

REMARKS

Claims 1-10 are pending. Applicants thank the Examiner for the telephone conversation in which claims 1-10 were elected. Applicants reserve the right to pursue remaining claims 11-21 in a Divisional Application.

I. Objection to Abstract

Applicants include herewith a replacement abstract. This replacement abstract is believed consistent with MPEP 608.01(b).

II. Provisional Rejection of Claims 1-10 under §103 for nonstatutory obviousness-type double patenting

Claims 1-10 were provisionally rejected on the grounds of nonstatutory obviousness-type double patenting in light of Claims 1-28 of co-pending application 10/665671 to Andersen. Without acquiescing to this rejection, and for the purposes of expediting prosecution, Applicants will file a terminal disclaimer for the present Application if appropriate when claims are allowed.

Further, Claims 1-10 were provisionally rejected on the grounds of nonstatutory obviousness-type double patenting in light of Claims 1-48 of co-pending application 10/693,609 to Friedlander. Applicants note that the claims in Friedlander have recently been amended in an office action, thus likely rendering this rejection moot. Without acquiescing to this rejection, and for the purposes of expediting prosecution, Applicants will file a terminal disclaimer for the present application if appropriate when claims are allowed.

III. Rejection of Claims 1-10 under §103

The Examiner asserted that Claims 1-10 are obvious over Barany et al., (U.S. Patent 6,027,889, hereinafter "Barany) in view Godfrey et al. (Journal of Molecular Diagnostics (2000) Vol. 2, No. 2: 84-91, hereinafter "Godfrey). The Examiner found that Barany teaches a method of detecting nucleic acid sequence differences using coupled ligation detection reaction (LDR) and polymerase chain reaction. Action at p.11-12.

The Examiner acknowledged that Barany does not disclose employing real-time detection methods or detection through comparing threshold values. Action at p.12. However, the Examiner alleges that Godfrey makes up for this deficit in Barany when Godfrey discloses "methods for comparing real-time detection values, [where Godfrey] expressly disclose[s] detecting differences in threshold values to quantify the amount of PCR target." Action at p. 12.

The Examiner concluded that one of skill in the art would have been motivated to combine the teachings of Barany with the teachings of Godfrey because "[a] practitioner of ordinary skill in the art would have recognized that if a particular probe set failed to ligate due to a particular nucleotide mismatch (i.e. SNP or allele), it would fail to produce a threshold value in subsequent amplification reactions (and vice versa) thereby allowing one to determine a particular allele at a given locus (i.e. heterozygosity or homozygosity) by comparison of threshold values ." The Examiner then concludes that "[i]t would have been prima facie obvious to one of ordinary skill in the art at the time of invention to practice the instant methods as claimed. Action at p. 13.

In order to demonstrate a prima facie case of obviousness, three showings must be established by the Patent Office. First, each of the elements must be

taught by the references or generally known in the art. Second, there must be a motivation for one of skill in the art to combine each of the elements to form the claimed combination. Finally, one of skill in the art must have some expectation that the combination would be successful.

Applicants respectfully submit that a *prima facie* case of obviousness has not been established. Specifically, the cited references, alone and in combination, do not teach each element of Applicants' claimed invention.

Applicants' claim 1 provides, in relevant part:

A method for detecting at least one target nucleic acid sequence. . . comprising. . . a ligation probe set. . . wherein one probe in each probe set further comprises an addressable portion located between the primer-specific portion and the target-specific portion, wherein the addressable portion comprises a sequence...forming an amplification reaction composition comprising. . . a labeled probe, wherein the labeled probe. . . comprises the sequence of the addressable portion or comprises a sequence complementary to the sequence of the addressable portion. . .

However, Barany does not teach this element of Applicants' claimed invention. This deficiency is not made up for by Godfrey. As the Examiner has not demonstrated that all of the elements are taught by Barany or Godfrey, or the combination of Barany and Godfrey, a *prima facie* case of obviousness has not been established by the Examiner.

As Claim 1 is non-obvious, and Claims 2-10 all ultimately depend from Claim 1, Claims 2-10 are also non-obvious. Applicants respectfully request that the rejection be withdrawn and the claims allowed.

IV. Conclusion

Applicants respectfully request reconsideration of the application and the timely issuance of a Notice of Allowance. In the event that the Examiner does not find the claims allowable, Applicants request that the Examiner contact the undersigned at (650) 554-3392 to set up an interview.

FEE AUTHORIZATION

If any additional fees not submitted with this response are required, please charge such fees to Applied Biosystems Deposit Account No 01-2213 (**Order No. 4798**).

Respectfully submitted,

Date: July 24, 2006



Andrew K. Finn, Reg. No. 54,097
Agent for Applicants

Correspondence Address

Customer No. 22896
Applera Corporation
Applied Biosystems Group
850 Lincoln Centre Drive
Foster City, CA 94404
Tel: 650-554-3392
Fax: 650-638-6677